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DEVELOPMENT OF THE

Good progress in oil production at Abercorn

DEVELOPMENT in a countryside such as that of Abercorn presents unique problems, some of them so strictly conditioned by the physical and geographical facts as to be virtually insoluble. There is a high, concentrated rainfall—up to 50 inches—with the usual long dry period; there is the leaching effect of this on the minerals in the soil—so that soils generally are poor unless carefully nursed and fortified; there is the hilly nature of the country, seldom suitable for extensive mechanical culture of staple crops; and there is rather heavy bush cover, or tall, coarse grass.

There is also complete lack of large-scale local markets; and 500 miles of indifferent road over which both products exported and supplies imported (such as fertiliser) must travel at rates between 1d. and 3d. per lb.

To get a 200-lb. bag of maize to the line of rail must cost at least 30s., and to get a ton of fertiliser to Abercorn at least £20 in transport alone.

Thus, large-scale production of staple crops requiring fertiliser, such as maize or tobacco, is hardly worth consideration. Any useful cash crop must be a high value, low weight and low bulk product such as coffee or—even more ideally fulfilling the conditions — essential oils.

Neither of these products requires large, level areas of good soil; neither requires anything much in the way of large-scale imports; both are high-value products able to bear transport costs at existing levels.

by

J. L. Carlin

GOOD COFFEE

Abercorn at one time had an excellent name on the London market for its Blue Mountain coffee, and the small quantity exported fetched high prices. In 1935, 627 cwt. was produced from 416 acres.

At this time, the local European co-operative ran a coffee-processing and packing factory, which later provided most of the coffee (and it *was* coffee!) for the troops in East Africa.

The war, however, disrupted all planting activity because most of the planters had to leave their estates and the law required the destruction of the trees so that neglect would not lead to widespread infestation of the area by borer and other pests.

Those few who returned expected a post-war slump and, as coffee does not bear a saleable crop for some three to five years, they did not re-plant. There are now some small plantations, the produce of which is consumed locally.

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Coffee is thus a proved crop in the area; but it is extremely sensitive to climatic conditions so that at Abercorn it does best under careful controlled irrigation, by which means flowering may be induced at the correct time for the berries to set.

BETTER PROPOSITION

Government policy is to stimulate African coffee production on lines that have proved so successful in parts of East Africa. It is, however, a more difficult problem at Abercorn, both for the climatic reasons mentioned above and because the local Africans have no tradition of agriculture, or plantation work.

The indigenous plant *Æolanthus Gamwellii*, whose African name is "nindi," is a much better proposition and is being actively developed. Here again, Government policy is aimed at African production of a crop long ago discovered, processed and proved by private settler enterprise.

The plant was discovered by and named after Miss A. H. Gamwell who, with her sister Miss A. M. Gamwell, O.B.E., has been a settler at Abercorn since 1929. Both women gave unusually valuable active service throughout the two world wars.

Nindi is a perennial shrub reaching a height of five or six feet and is of fairly close, bushy growth, every branchlet bearing a large spray with profuse florets similar to lilac in type and colour, but rather more upright than fully pendant.

BEAUTIFUL SIGHT

There are lilac blue, pinky mauve and pure white varieties—all oil-bearing — and a plantation or natural colony is a very beautiful sight when in full flower in April.

The flower, under low pressure steam distillation, has given nearly three per cent by weight of a geraniol-type oil very valuable in perfumery and soap making and so far not threatened by synthetics. This percentage has been obtained locally under laboratory conditions by Miss Gamwell, and between one and two per cent has been obtained by her and Mr. J. H. Venning in somewhat primitive stills from batches of 400 lb. or so of flower.

When it is realised that some commercially profitable oils distil only one-tenth of this quantity and a few yield only one-twentieth of one per cent, it is clear that nindi is a proposition well worth developing.

The prospects are, however, now very much brighter because of recent news from Britain of laboratory trials with a different process giving much higher yields, and reported also to extract an excellent yield of oil from the leaves of the plant that could never be achieved under steam distillation at Abercorn.

There is a good London market eager for large quantities of this oil and prepared to buy in one-ton lots (44-gallon drums of 3 to 4 cwt. each) at a price of about 60s. per lb; but 1 cwt. of oil — at the old yields — may mean something approaching five tons of flower-produce, perhaps, of 12,000 mature shrubs.

BEST CONDITIONS

So far, Miss Gamwell and Mr. Venning, with flower from their own small acreages and supplies gathered in the countryside, have sent to U.K. a number of 20 to 40lb. consignments, which have been sold at a good price but have been of little use to the market except for trials and experiments.

The Agricultural Department has now taken over the expensive long-term job of finding the conditions under which this wild plant can be domesticated, and has had strong support from the Development Commissioner in this.